

REMARKS

This amendment is in response to the Office Action mailed on February 5, 2009. Claims 61-118 were pending. By this amendment, claims 61, 76-89, 91, and 104-118 are amended, claims 65, 68, 75, 80, 90, 93, and 101 are canceled, and new claims 119-125 are presented. Reconsideration and withdrawal of the rejections are respectfully requested in view of the following remarks.

No new matter is added. For example, the use of RPC's dispatching function when the RPC IID is present, and the bypass of RPC's dispatching function when the alternative identifier is present, is fully supported by the original specification. See, for example, p15 (8-10), p22 (14-16), p25 (2-11, 14-end), p26 (1-4, 12-14), etc. The use of an alternative identifier, the identifier being more specific than the RPC IID, and the alternative identifier being an IPID are fully supported by the original specification. See, for example, p5 (10-12), p26 (14-15), etc.

It is noted that all differences between the cited reference(s) and each claim may not necessarily be recited herein. This is not an admission on the part of the Applicant that Applicant concurs with the Examiner's assertions regarding the patentability of said claims over the cited reference(s). Applicant, in some cases, may simply choose to highlight particular differences between the claims and the reference(s). Such differences may render any differences not explicitly addressed moot.

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1. Summary of Telephonic Interview

Applicant thanks Examiner Li B Zhen for the courtesy of a telephonic interview on Tuesday, April 14th, 2009. Henry Gabryjelski, Reg. No. 62,828 and Bryan Webster, Reg. No. 47,217 were present for the Applicant, and Examiner Zhen was present for the USPTO.

During the interview, the 35 USC 103(a) rejections of independent claim 61 was discussed. Various types of amendments were discussed. In particular, an amendment to Claim 61 which indicated that the bypassed RPC dispatching function would normally be used except for the lack of the RPC IID, was discussed. (Applicant notes that the amendment that was allowed is presented herein as Claim 120, which depends directly from Claim 61.) Agreement was reached that the addition of this feature clarifying that standard RPC functions are still called would overcome the present 35 USC 101 rejection.

Applicant thanks the Examiner for the courtesies extended to him throughout the call.

2. Rejection of Claims 61–118 under non–statutory obviousness–type double patenting

Claims 61–118 stand rejected under non–statutory obviousness–type double patenting as being unpatentable over claims 1–58 of U.S. Patent No. 6,708,233 (hereinafter Patent223) in view of “DCOM and CORBA Side by Side, Step by Step, and Layer by Layer” (hereinafter Chung).

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A terminal disclaimer under 37 CFR 1.321(c) is filed with the current response, rendering this objection moot.

3. Rejection of Independent Claim 61 under 35 USC 103(a)

Claim 61 stands rejected under 35 USC 103(a) as being unpatentable over "Harnessing User-Level Networking Architectures for Distributed Object Computing over High-Speed Networks", cited in IDS dated 1/22/2004, (hereinafter Madu) in view of Chung.

Madu discloses a system which enables DCOM to completely bypass RPC through the use of custom object marshalling. Madu, Abstract.

Chung discloses how DCOM is an extension built upon RPC, and compares its functionality to that of CORBA, discussing each layer of the two architectures in turn. Chung, Introduction.

Independent Claim 61 recites a method of communication between a first object located on a first computer and a second object located on a second computer, the first and second computers connected by a network, the method comprising: (1) "*calling an interface of the second object by the first object on the first computer, and wherein the calling the interface of the second object by the first object comprises (a) bypassing a mechanism, the bypassed mechanism comprising adding a remote procedure call (RPC) interface identifier (IID) of the second object to the call, and (b) adding an alternative identifier to the call*", (2) "*performing RPC utility functions on the call at the first computer*", and (3) "*communicating the call to the second computer*", wherein the second computer: (4) "*receives the call*", (5) "*performs RPC utility functions on the call*",

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(6) “*determines if the call includes the alternative identifier*”, (7) “*if the call does not include the alternative identifier, calls an RPC dispatching function; if the call does include the alternative identifier, calls an alternative dispatching function based on the alternative identifier, bypassing the RPC dispatching function*”, (8) “*invokes a stub*”, and (9) “*accesses the interface of the second object identified by the interface pointer identifier*.”

In rejecting claim 61, the Office Action asserts that Madu discloses:

passes the call to a dispatching function so as to bypass a remote procedure call dispatching function [See Fig. 5, standard RPC is bypassed].

Office Action, Page 6. Based on the above, it seems the Office Action is equating the total bypass of RPC as disclosed in Madu with the bypass of the RPC dispatch function as recited in Claim 61. Applicant has reviewed the reference, including the cited portions, and respectfully disagrees. However, Applicant has modified the claim language to more clearly indicate that the bypassed function would normally be called except for the alternative identifier.

Claim 61 now recites, *inter alia*, “*if the call does not include the alternative identifier, calls an RPC dispatching function; if the call does include the alternative identifier, calls an alternative dispatching function based on the alternative identifier, bypassing the RPC dispatching function*”.

In contrast, Madu discloses a method of not using RPC at all. Madu fails to teach or suggest dispatching a call based on whether it contains an alternative identifier instead of an RPC IID. Madu fails to teach or suggests calling into a dispatching function when the alternative identifier exists, and

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calling the normal RPC dispatching function when the alternative identifier does not exist.

Furthermore, although portions of Madu disclose that interfaces can be used as parameters in method calls, Madu fails to teach or disclose any specific manner in which the marshalling in Madu occurs for interface pointers. In addition, further detail in Madu shows that Madu teaches the addition of information: “In order to support co-existence of standard and custom remote proxies and to preserve object identity, the available context information needs to be extended by using either ‘channel hooks’ [9] or custom class factories.” Madu, section 4.1, just above Figure 5. Emphasis added. Accordingly, Madu fails to teach or suggest the removal of the RPC IID.

Chung also discloses the custom marshalling functionality available through the use of DCOM. However, it does not disclose any new method of marshalling interfaces across machines. It fails to provide any notification of the use of an alternative dispatching function when an alternative identifier is present, and the RPC dispatching function with the alternative identifier is not present. Accordingly, the application of Chung fails to remedy the deficiencies of Madu.

Neither Madu nor Chung, alone or in combination, teach or suggest at least “*if the call does not include the alternative identifier, calls an RPC dispatching function; if the call does include the alternative identifier, calls an alternative dispatching function based on the alternative identifier, bypassing the RPC dispatching function*” as recited in Claim 61.

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As Madu and Chung (alone or in combination) fail to teach or suggest all the features of Claim 61, the Applicant respectfully submits that Claim 61 is allowable over Madu in view of Chung, and the rejection of Claim 61 should be withdrawn.

Claims 62–75 each depend from Claim 61, and are allowable at least by virtue of their dependency on Claim 61. Accordingly, the rejection of these claims should also be withdrawn.

Claims 119–120 depend from Claim 61, and are allowable at least by virtue of their dependency on Claim 61.

4. Rejection of Independent Claim 76 under 35 USC 103(a)

The Office Action rejection of Claim 76 states, in full, "As to Claim 76, this is a program product claim that corresponds to method claim 61; see the rejection to claim 61 above, which also meet the limitations of this program product claim". Office Action, page 7.

Claim 76 recites a computer-readable medium having computer-executable instructions to enable communications between a first object located on a first computer and a second object located on a second computer, the first and second computers connected by a network, the computer-executable instructions performing steps comprising (1) "*calling an interface of the second object by the first object on the first computer, wherein the computer-executable instructions for calling the interface of the second object by the first object comprise (a) computer-executable instructions for bypassing computer executable instructions, the bypassed computer-executable instructions*

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comprising adding a remote procedure call (RPC) interface identifier (IID) of the second object to the call, and (b) adding an alternative identifier to the call, (2) *“performing RPC utility functions on the call at the first computer”*, (3) *“communicating the call to the second computer”*, wherein the second computer (4) *“receives the call”*, (5) *“performs RPC utility functions on the call”*, (6) *“determines if the call includes the alternative identifier”*, (7) *“if the call does not include the alternative identifier, calls an RPC dispatching function; if the call does include the alternative identifier, calling an alternative dispatching function based on the alternative identifier, bypassing the RPC dispatching function”*, (8) *“invokes a stub”*, and (9) *“accesses the interface of the second object identified by the interface pointer identifier”*.

For at least the reasons described above with respect to Claim 61, neither Madu nor Chung, alone or in combination, teach or suggest at least *“if the call does not include the alternative identifier, calls an RPC dispatching function; if the call does include the alternative identifier, calling an alternative dispatching function based on the alternative identifier, bypassing the RPC dispatching function”* as recited in Claim 61.

As Madu and Chung (alone or in combination) fails to teach or suggest all the features of Claim 76, the Applicant respectfully submits that Claim 76 is allowable over Madu in view of Chung, and the rejection of Claim 76 should be withdrawn.

Claims 77–90 each depend from Claim 76, and are allowable at least by virtue of their dependency on Claim 76. Accordingly, the rejection of these claims should also be withdrawn.

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Claim 121 depends from Claim 76, and is allowable at least by virtue of its dependency on Claim 76. Accordingly, this claim is also allowable.

5. Rejection of Independent Claim 91 under 35 USC 103(a)

Claim 91 stands rejected under 35 USC 103(a) as being unpatentable over Madu in view of Chung.

Independent Claim 91 recites a method of communication between a first object located on a first computer and a second object located on a second computer, the first and second computers connected by a network, the method comprising: (1) *“receiving, at the second computer, a call to an interface of the second object from the first object on the first computer”*, (2) *“performing remote procedure call (RPC) utility functions on the received call, wherein the RPC utility functions are performed on the received call by a RPC utility layer, the RPC utility layer comprising a pointer to an alternative dispatching function, wherein the pointer allows the call to be passed directly to the dispatching layer”*, (3) *“determining the call does not contain an RPC interface identifier (IID)”*, (4) *“passing the received call to the alternative dispatching function so as to bypass a RPC dispatching function, wherein the bypassed RPC dispatching function would have otherwise been called if the RPC IID was contained in the call”*, (5) *“invoking a stub”*, and (6) *“accessing the interface of the second object”*.

In rejecting Claim 91, the Office Action asserts that Madu in view of Chung discloses:

wherein the pointer allows the call to be passed directly to the dispatching layer [DCOM also provides a custom marshaling mechanism

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to bypass the standard marshaling procedure; Section 4, p. 10 of Chung]; passing the received call to a dispatching function so as to bypass a remote procedure call dispatching function [see Fig. 5, standard RPC is bypassed of Madu]

Office Action, Page 8. Based on the above, it seems the Office Action is equating "*a pointer to an alternative dispatching function*" as recited in Claim 91 with the pointer to the custom marshaling mechanism disclosed in Chung, and further seems to be equating the "*passing the received call to the alternative dispatching function so as to bypass a RPC dispatching function, wherein the bypassed RPC dispatching function would have otherwise been called if the RPC IID was contained in the call*" as recited in Claim 91 with the full bypass of RPC as disclosed by Madu. Applicant has reviewed the reference, including the cited portions, and respectfully disagrees.

As described more fully above with respect to Claim 61, Madu fails to disclose the use of the alternative dispatch function based on whether the RPC IID exists in the call. Furthermore, the custom marshalling disclosed in Chung speaks only of standard DCOM functionality, and does not teach or disclose the removal of the RPC IID, and the providing an alternative identifier to be used for forwarding the call to the alternative dispatching function, wherein the bypassed RPC dispatching function would have otherwise been called if the RPC IID was contained in the call.

For at least the reasons described above, Applicant submits that neither Madu nor Chung, alone or in combination, teach or suggest all the features of Claim 91. Accordingly, Claim 91 is allowable over Madu in view of Chung, and the rejection of Claim 91 should be withdrawn.

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Claims 92–103 and 122 each depend from Claim 91, and are allowable at least by virtue of their dependency on Claim 91. Accordingly, the rejection of these claims should also be withdrawn.

Claim 122 depends from Claim 91, and is allowable at least by virtue of its dependency on Claim 91.

6. Rejection of Independent Claim 104 under 35 USC 103(a)

The Office Action rejection of Claim 104 states, in full, “As to Claim 104, this is a program product claim that corresponds to method claim 91; see the rejection to claim 91 above, which also meet the limitations of this program product claim”. Office Action, page 8.

Claim 104 recites a computer-readable medium having computer-executable instructions to enable communications between a first object located on a first computer and a second object located on a second computer, the first and second computers connected by a network, the computer-executable instructions performing steps comprising

(1) “receiving, at the second computer, a call to an interface of the second object from the first object on the first computer”, (2) “performing remote procedure call (RPC) utility functions on the received call, wherein the computer-executable instructions for performing RPC utility functions on the received call comprise a pointer to the dispatching function, wherein the pointer allows the call to be passed directly to the dispatching layer”, (3) “determining the call does not contain an RPC interface identifier (IID)”, (4) “passing the received call to the alternative dispatching function so as to bypass a RPC dispatching function,

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wherein the bypassed RPC dispatching function would have otherwise been called if the RPC IID was contained in the call, (5) “invoking a stub”, and (6) “accessing the interface of the second object”.

For at least the reasons described above with respect to Claim 91, Applicant therefore submits that neither Madu nor Chung, alone or in combination, teach or suggest at least “*passing the received call to the alternative dispatching function so as to bypass a RPC dispatching function, wherein the bypassed RPC dispatching function would have otherwise been called if the RPC IID was contained in the call*” as recited in Claim 104.

As Madu and Chung (alone or in combination) fails to teach or suggest all the features of Claim 104, the Applicant respectfully submits that Claim 104 is allowable over Madu in view of Chung, and the rejection of Claim 104 should be withdrawn.

Claims 105–116 each depend from Claim 104, and are allowable at least by virtue of their dependency on Claim 104. Accordingly, the rejection of these claims should also be withdrawn.

Claim 123 also depends from Claim 104, and is allowable at least by virtue of its dependency on Claim 104.

7. Rejection of Independent Claim 117 under 35 USC 103(a)

Claim 117 stands rejected under 35 USC 103(a) as being unpatentable over Madu in view of Chung.

Independent Claim 117 recites a computing device comprising (1) “*an object, the object comprising an interface that is called by a second object on a*

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second computing device", (2) "a network connection, wherein the network connection communicational connects the computing device to the second computing device", (3) "a remote procedure call (RPC) utility layer, wherein the RPC utility layer (a) determines whether the call contains an RPC interface identifier (IID), (b) performs RPC utility functions on the interface call by the second object, and (c) passes the interface call to a dispatching function , the dispatching function being a RPC dispatching function when the call contains an RPC IID, and an alternative dispatching function when the call does not contain an RPC IID, and wherein the RPC utility layer comprises a pointer to the alternative dispatching function, wherein the pointer allows the call to be passed directly to the alternative dispatching function", and (4) "a dispatching layer comprising the alternative dispatching function, wherein the dispatching layer invokes a stub and accesses the interface."

In rejecting Claim 117, the Office Action asserts that Madu in view of Chung discloses:

a remote procedure call utility layer [custom stub manager, Section 4.2 of Madu], where in the remote procedure call utility layer performs remote procedure call utility functions on the interface call by the second object [Section 4, p. 4 of Madu], and passes the interface call to a dispatching function [See Fig. 5, standard RPC is bypassed of Madu] and wherein the remote procedure call utility layer comprises a pointer to the dispatching function [p. 6, right column, step 6 of Chung]

Office Action, Page 9. Based on the above, it seems the Office Action is equating the bypass of the RPC dispatching function with the wholesale bypass of RPC as disclosed in Madu. Applicant has reviewed the reference, including the cited portions, and respectfully disagrees.

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Applicant notes that claim 117 as amended recites “*(c) passes the interface call to a dispatching function , the dispatching function being a RPC dispatching function when the call contains an RPC IID, and an alternative dispatching function when the call does not contain an RPC IID, and wherein the RPC utility layer comprises a pointer to the alternative dispatching function, wherein the pointer allows the call to be passed directly to the alternative dispatching function*”. Accordingly, the clarification that the bypassed RPC dispatching function is bypassed only when the RPC IID is not provided. For at least the reasons described above with respect to Claims 61 and 91, Applicant submits that neither Madu nor Chung, alone or in combination, teach or suggest at least this feature of Claim 117.

As Madu and Chung (alone or in combination) fails to teach or suggest all the features of Claim 117, the Applicant respectfully submits that Claim 117 allowable over Madu in view of Chung, and the rejection of Claim 117 should be withdrawn.

Claim 124 depends from Claim 117, and is allowable at least by virtue of its dependency on Claim 117. Accordingly, this claim is also allowable.

8. Rejection of Independent Claim 118 under 35 USC 103(a)

Claim 118 stands rejected under 35 USC 103(a) as being unpatentable over Madu in view of Chung.

Independent Claim 118 recites a computing device comprising (1) “*an object, the object calling an interface of a second object on a second computing device*”, (2) “*a remote procedure call utility layer, wherein the remote procedure*

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call utility layer performs remote procedure call utility functions on the call", (3) "a bypass of a mechanism, the mechanism comprising adding a remote procedure call (RPC) interface identifier (IID) to the call", and (4) "a network connection, wherein the network connection communicates the call to the second computing device, and wherein further the second computing device receives the call, performs RPC utility functions on the call, determines whether the call contains the RPC IID, when the call contains the RPC IID, passes the call to a RPC dispatching function, when the call does not contain the RPC IID, passes the call to an alternative dispatching function so as to bypass the RPC dispatching function, invokes a stub, and accesses the interface of the second object".

In rejecting Claim 118, the Office Action asserts that Madu in view of Chung discloses:

the second computing device ... performs remote procedure call utility functions on the call [Section 4, p. 4 of Madu], passes the call to a dispatching function so as to bypass a remote procedure call dispatching function [see Fig. 5, standard RPC is bypassed of Madu]

Office Action, Page 10. Based on the above, it seems the Office Action is equating the passing the call to the alternative dispatching function so as to bypass the RPC dispatching function as recited in Claim 118 with the total bypass of all RPC functions as disclosed in Madu.. Applicant has reviewed the reference, including the cited portions, and respectfully disagrees.

Applicant notes that claim 118 as amended recites "*determines whether the call contains the RPC IID, when the call contains the RPC IID, passes the call to a RPC dispatching function, when the call does not contain the RPC IID,*

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passes the call to an alternative dispatching function so as to bypass the RPC dispatching function". Accordingly, the clarification that the bypassed RPC dispatching function is bypassed based on whether the RPC IID is provided is made more clear. For at least the reasons described above with respect to Claims 61, 91, and 117, Applicant submits that neither Madu nor Chung, alone or in combination, teach or suggest at least this feature of Claim 118.

As Madu and Chung (alone or in combination) fails to teach or suggest all the features of Claim 118, the Applicant respectfully submits that Claim 118 allowable over Madu in view of Chung, and the rejection of Claim 118 should be withdrawn.

Claim 125 depends from Claim 118, and is allowable at least by virtue of its dependency on Claim 118. Accordingly, this claim is also allowable.

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10. CONCLUSION

Accordingly, in view of the above amendment and remarks it is submitted that the claims are patentably distinct over the prior art and that all the rejections to the claims have been overcome. Reconsideration and reexamination of the above Application is requested. Based on the foregoing, Applicants respectfully requests that the pending claims be allowed, and that a timely Notice of Allowance be issued in this case. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the telephone number listed below.

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If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee that is not covered by an enclosed check please charge any deficiency to Deposit Account No. 50-0463.

Respectfully submitted,
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Date: May 5, 2009

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I hereby certify that this correspondence is being electronically deposited with the USPTO via EFS-Web on the date shown below:

May 5, 2009
Date

/Noemi Tovar/
Noemi Tovar

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